ATTRACTING BEGINNING TEACHERS: THE INCENTIVES AND ORGANIZATIONAL CHARACTERISTICS THAT MATTER

Concern about teacher shortages has been widespread in the last decade. Numerous reports have focused attention on the issue in the United States where the shortage is particularly acute in specific teaching specialties and in urban and rural schools (Hirsch, Koppich, & Knapp, 2001; Murphy & Novak, 2002; United States Department of Education, 2004; Urban Teacher Collaborative, 2000). Attempts to alleviate the shortage have taken place at multiple levels. Some have focused on the attrition rate of new teachers and recommended attention to the mentoring and development of new teachers in order to keep them in the profession (Ingersoll, 2001; Johnson, Verg, & Donaldson, 2005). Other responses have centered on methods to attract more beginning teachers, such as providing alternative routes to teacher certification in order to increase the general pool of certified teachers available to apply for positions (NCEI, 2006). In some locations, extra compensation is provided for geographic areas or subject areas where there are shortages (e.g., North Carolina's Math, Science, and Special Education program).

Policy changes such as these, made at federal and state levels, may increase the pool of teachers by making access to teaching easier or providing rewards that are greater than other competing occupations, but the problem for local authorities remains: school districts must attract potential teachers to apply for positions in their particular organizations. To put it another way, the educational sector must compete with other sectors of the economy in order to draw talented individuals into the teaching profession; and within the educational sector, different employers compete against each other for qualified teachers. We presume that school districts generally seek larger pools of applicants in order to maximize the possibilities of hiring highly qualified teachers. Therefore, school districts with teaching vacancies adopt strategies to increase the number of applications they receive for teaching vacancies. Evidence of these strategies appears in newspaper advertisements, school district attendance at recruiting fairs, and school district partnerships with teacher training institutions that provide desirable beginning teachers. Understanding what new teachers seek in a teaching position could enable school districts to target their recruitment strategies more effectively, but there is little research to guide these efforts.

The purpose of this study was to determine the factors that are salient to new teachers when they consider where (that is, in which school districts) to submit applications for positions. Understanding these factors could help school district administrators to target recruitment materials to address salient factors as well as to make predictions about how operational decisions might impact potential applicants. These decisions include where to allocate resources (e.g., to salaries or to mentoring programs) and how to address working conditions that might dissuade candidates. For example, if (as currently employed teachers may claim) limits on out-of-

class student supervision duties were found to be salient to applicants' decisions, school districts may want to reassign these duties to paraprofessionals as a means to attract applicants. On the other hand, if duty limits are relatively less important to beginning teachers, resources might be devoted to beginning teaching salaries or to mentoring and teacher support.

Prior Research

With regard to the private sector, Rynes and Barber (1990) cited three areas employers might address to advance recruitment objectives: improving the recruitment practices, targeting nontraditional applicants, and modifying the employment inducements. Rynes (1991) also points out that employers decide whether and where to advertise positions, the resources directed toward recruiting, application procedures, and timing of the hiring process. She noted the importance of job vacancy characteristics and the dearth of research on them across all employers:

> One set of employer decisions that merits closer scrutiny concerns the determination of vacancy characteristics such as pay, hours, working conditions, benefits, and perquisites. Applicants' job choices are obviously affected by these variables; yet there has been little speculation about how vacancy characteristics might be modified in the service of attracting applicants. (p. 432)

Existing Recruitment Practices in School Districts

Employing school districts make decisions in each of these categories. School districts develop and distribute recruitment materials that describe the school district and the teaching positions available. Many districts have online application procedures for vacancies in an effort to make the process easier and more accessible. Targeting nontraditional applicants has been enacted through alternative certification and "grow-your-own" programs. Some districts have adopted strategies such as developing closer relationships between school districts and colleges of education, more visible recruiting, and streamlined application processes (Urban Teacher Collaborative, 2000).

Some school districts have explicitly designed programs to address selected vacancy characteristics. For example, some schools have offered monetary bonuses for hard-to-fill positions, tuition assistance for graduate course work, assistance with National Board Certification, or arrangements for loan forgiveness (Urban Teacher Collaborative, 2000; Cornett & Gaines, 2002; Murphy & Novak, 2002). Others have developed programs to mentor beginning teachers (Berry, 2004; Cornett & Gaines, 2002). States such as Mississippi, Florida, Georgia, Louisiana, and North Carolina have offered bonuses to attract teachers to shortage areas (Cornett & Gaines, 2002).

Preferences of Preservice Teachers

Among these inducements related to job characteristics, what is likely to have the desired effect of attracting more applicants to consider the school district as a potential employer? Although concern with looming or already extant teacher shortages has provoked significant research on the topic of teacher recruitment and retention, very little research examines the preferences of student teachers, the group most likely to be targeted for hire by school districts. Moreover, most research in the area investigates the choice to teach or pursue another occupation, rather than the recruitment of student teachers into specific schools or districts.

In a recent review of empirical literature on teacher recruitment and retention in the United States, Guarino, Santibanez, and Daley (2006) found 4,919 studies related to their research topic but only 46 studies that were empirical, used data gathered since 1990, and met their criteria of relevance, scholarship, and quality. In this review, the authors addressed characteristics of individuals who enter the teaching profession (as opposed to other occupations), characteristics of individuals who remain in the profession, characteristics of schools and districts that are successful at recruiting and retaining teachers, and types of policies that prove effective in recruiting and retaining teachers. Although several studies in their review used data from college undergraduates (for example, comparing characteristics of those entering teaching to those choosing other occupations) only three of the studies focused on preservice teachers. Two studied the factors that drew prospective African American teachers into the profession (King, 1993; Shipp, 1999). One other study (Carter & Carter, 2000) surveyed 170 education majors about their interest in teaching middle grades (as opposed to elementary or high school) and found that their reasons for avoiding middle grades concerned classroom discipline and adolescent attitudes.

A study of both experienced and inexperienced (preservice) teachers asked them to react to videotapes of simulated recruitment interviews constructed to vary the attributes thought to be important to job seekers (Young, Rinehart, & Heneman, 1993). Subjects viewing the videotapes then rated their responses to the interviews. The authors found that the applicants differentiated between the types of attributes, rating the economic category (i.e., salary growth, extracurricular salary, benefits, leaves) as significantly less attractive than intrinsic (i.e., innovative growing community, good parent relationships) and work context (i.e., culture, recreation, working hours, support, planning time, length of day) categories. There were no differences between the experienced and inexperienced teachers. The authors recommended that school districts wishing to remain competitive in recruiting should not neglect providing information about the intrinsic and work context attributes of the position.

Recently, Winter and Melloy (2005) asked 168 preservice teachers and 168 experienced teachers to read and rate job descriptions for schools that differed in student achievement levels (as described by the state's performance labels). They discovered that the inexperienced teachers general-

ly gave the jobs higher ratings than those of the experienced teachers, and that higher student achievement influenced the ratings positively.

Preferences of Newly Employed Teachers

Apart from this handful of studies, information about what draws beginning teachers to particular school districts is limited to studies of those already employed as teachers. Winter, Ronau, and Muñoz (2004) studied one large school district's new hires in order to determine the school district attributes that had most strongly influenced these novices to accept a position there. They found that economic, school, community, and hiring process attributes were all important. The highest ranked attributes were teacher salary schedule, school location in the district, and the school-site interview. These findings are consistent with the findings of Liu, Kardos, Kauffman, Peske, and Johnson (2004) who interviewed early career teachers and found them worried about being able to afford to stay in teaching. These authors concluded that the teachers stayed in teaching in spite of the salary, rather than being attracted to it because of the financial incentives. One other study has somewhat different results: A survey of teachers who had been in the classroom for five years or less revealed that these teachers had distinct preferences for qualitative characteristics of the position as being more important than high salaries (Farkas, Johnson, & Foleno, 2000). These studies captured data from those teachers whom the district successfully recruited but did not seek to find information from the prospective teachers who did not apply with the districts or who were passed over.

Finally, Johnson and Birkeland (2003) studied "voluntary movers" within school districts. These were second-career teachers who were discouraged at the end of their first year of teaching but who chose to move to other schools rather than leave the profession. The schools they went to provided:

> …appropriate course assignments, sufficient curriculum guidelines, and efficient systems for discipline, communication with parents, and smooth transitions between classes. They also looked for schools where they could feel like professionals–sharing ideas and resources with colleagues and receiving respect and guidance from the principal. (p. 21)

Interestingly, these researchers found that the move to schools that offered these features was also a move from poorer to wealthier students, leading them to conclude "efforts to stem turnover and attrition must center on the school site and on the factors that support good teaching" (p. 24).

With the exception of the 24 undergraduate subjects in the Young et al. (1993) study and the recent work by Winter and Melloy (2005) and Carter and Carter (2000), the studies cited above were based on responses of currently employed teachers and did not capture the views of those who never applied in the districts, or who applied but were hired elsewhere or never hired. Our study attempted to capture responses from those potential applicants on an array of factors that might influence job application

decisions that have yet to be studied, such as the demographic characteristics of the school, the school faculty social climate, and the nature of teacher-principal interactions. Understanding the value that preservice teachers, at the conclusion of their student teaching, place on various aspects of a school or district would enhance school districts' abilities to recruit applicants for teaching vacancies thereby beginning the selection process with the largest possible applicant pool.

Constraints on School Districts

As school district administrators attempt to determine how to allocate resources for district operations, including recruiting new teachers, they must give consideration to some constraining factors. First, there are factors that may influence applicant choices, but over which schools and districts have little control. These include geographic location, which is of significant importance according to the Southern Regional Education Board (2002), and income level and minority-majority status of students. If these are of considerable importance to potential applicants, districts may wish to consider how to mitigate the effects with an emphasis on the positive aspects of such characteristics. Another constraint is the limitation on district resources. For example, potential teachers may be attracted to smaller class sizes, but districts may be unable to afford the increased number of teachers required to lower class size in a significant way.

On the other hand, if districts learn the characteristics of schools that applicants desire, the recruitment materials and strategy can be targeted to feature these aspects. Additionally, districts may learn that there are factors desired by applicants that can be modified in order to enhance the appeal to potential applicants. For example, if applicants place a high value on mentoring, districts may want to develop mentoring programs for novices. Without an understanding of what matters most to applicants, however, districts may fail to emphasize attractors or fail to address concerns of potential applicants. This study was designed to provide information about the reaction of potential applicants to a variety of factors that school districts could address in order to maximize appeal to potential applicants. The study focused on graduating student teachers who were close to the employment decision and whose preferences have not drawn significant attention from researchers in the past.

Research Question and Method

The research question addressed by this study is "How do prospective teachers rate the attractiveness of incentives or disincentives to applying for a position in particular school districts?"

Subjects

A total of 469 students graduating from either post-baccalaureate or traditional undergraduate teacher education programs in the spring of 2004

took a survey. These graduates came from three campuses, two large public universities (38.8% of the respondents from one; 65.9% from the other) and one private university (5.3%) in a large southwestern metropolitan area. Women outnumbered men by more than four to one (83.5% of the sample was female). About half of these graduates are in elementary education (49.5%), and about one fourth are in secondary education (23.8%). The rest reside in special education (7.7%), early childhood education (13.1%), and English as a second language or bilingual education (5.8%). The sample was dominated by those graduating from traditional undergraduate programs (88.3%), while 11.7% were from post-baccalaureate programs. About one fourth (25.6%) had already accepted a teaching job offer. The mean age of this sample was 26.5 with a range from 20 to 62. These data indicate the diversity of the sample in terms of gender, preparation program, and intended grade level or specialization. We concluded that this sample was fairly representative of the population of teachers in an urban area.

These graduating students were approached in their capstone seminar, or other meeting, where they were requested to voluntarily participate in this survey. Given that the survey was distributed at a required meeting, and that students completed it during the meeting, we estimate response rate at close to 100%. Surveys had a few omitted responses. No attempt was made to impute missing data.

The Survey Instrument

The *Graduate Employment Preferences Survey* (GEPS) was developed by these researchers to determine what incentives, financial and non-financial, are most and least attractive when new teachers consider a teaching opportunity or specific offer of employment as a teacher. The survey obtains demographic information and lists a total of 30 incentives, derived from literature on teacher recruitment and discussions with various educators involved in setting hiring policies and procedures, augmented with a post-hoc evaluation of results. The actual survey can be found in the Appendix.

Respondents were asked to rate the degree of attractiveness of the choices for each item using a five-point Likert scale: strongly attractive, attractive, neither attractive nor unattractive, unattractive, strongly unattractive. A moderate score on this scale is 3.00, and 1.00 would indicate that the incentive is very unattractive and 5.00 would indicate that the incentive is very attractive. Examples of items include:

- Potential for future salary growth
- Guaranteed prep time during the student day
- Structured curriculum so you know what you are supposed to teach and how to teach it

The GEPS was slightly modified following a review by a focus group of five students. It was then pilot-tested on a group of 70 students not a part of the respondent set. Further minor changes were made. Thus,

the development of the instrument followed procedures recommended for instrument development (Downing, 2006).

Validity of Interpretations of Scores Representing Incentives

Because a new survey instrument was used in this study, the validity of interpreting scale scores was a concern. This section reports on validity: How valid are the scores obtained in this survey? To answer this question, we assembled a body of validity evidence to support the claim that these scores could be used to answer our research question and that school districts might find this information dependable enough to use for policy and action to recruit and retain teachers. Validity evidence includes studies and procedures addressing content, reliability of scores, quality of items that comprise each scale, and studies of the structure of the data as would culminate from factor analysis or similar methods of inquiry.

Item quality was established via item analysis and the above-mentioned focus group interviews (Haladyna, 1997, 2004). Reliability of these scales was sufficiently high. Two empirical studies were done to further add validity evidence and support the claim that these scales provide valid information. Below, we report the results of a factor analysis to explore the structure of the data, then we report the reliability, and finally we report the results of an item analysis.

Content-Related Validity Evidence

A primary type of validity evidence addresses content (Kane, 2006). The survey was developed by a panel of experts in teacher education that included the researchers and was reviewed by teachers and teacher educators. Two empirical studies bear on the content of the survey: (1) factor analysis and (2) correlation analysis.

Factor analysis—A study of the structure of the data. To determine factors represented by the items, a principal components analysis was completed using an eigenvalue criterion of 1.00 for identifying viable factors. An equamax rotation was used. Gorsuch (1983) discussed the nuances of many competing rotations. Our rationale was to avoid the varimax procedure, which tends to emphasize a primary factor, and to seek a solution that produces many factors that are more equally represented. The factor analysis produced seven factors that explain 68.9% of the variation in the items. Table 1 shows the factor loadings for each variable, with loadings that best fit the factor appearing in the column in boldface. The eigenvalue, the variance explained by the rotated component, and the percent of variance explained are given at the bottom of the table.

Table 1

Factor Loadings for Exploratory Factor Analysis of Graduate Employment Preferences Variables

Item	Money	Prof	AR	Pos	Ach	Fam	Instr
Beginning salary	**0.187**	0.017	-0.008	0.165	0.060	0.037	0.082
Future salary	**0.869**	0.037	0.000	0.186	0.080	0.043	0.060
Benefits	**0.823**	0.117	0.051	0.094	0.003	0.013	0.085
Retirement	**0.681**	0.173	0.095	0.074	0.183	0.101	-0.021
Limited duty	0.104	-0.015	0.141	**0.698**	0.300	0.117	-0.022
Tuition	**0.494**	0.300	-0.029	0.273	-0.029	0.137	0.188
Supplemental pay	**0.428**	0.316	0.132	0.259	0.141	0.030	0.177
Shorter day	0.034	0.065	0.143	**0.798**	0.145	0.183	0.087
Personal leave	0.241	0.147	0.037	**0.711**	0.005	0.087	0.290
Preparation time	0.250	0.228	0.015	**0.559**	0.071	-0.015	0.366
High achievers	0.035	0.075	0.064	0.191	**0.809**	0.068	0.052
Home support	0.167	0.211	0.000	0.098	**0.745**	-0.002	0.048
Title I school	0.069	0.131	**0.811**	0.100	0.020	-0.028	-0.007
Principal	0.179	**0.668**	0.160	-0.003	0.176	0.072	0.154
Collaboration	0.128	**0.788**	0.109	0.180	0.147	0.123	0.025
Mentoring	0.106	**0.782**	-0.017	0.189	0.122	0.072	0.132
Preferred practices	0.085	**0.576**	0.080	0.236	0.052	0.206	0.245
ELL	0.004	0.086	**0.759**	0.013	0.026	0.143	0.277
Preferred schedule	0.022	0.017	0.278	0.054	0.065	0.123	**0.681**
Technology	0.070	0.220	0.180	0.166	0.231	-0.061	**0.599**
Class size	0.123	0.186	-0.081	0.225	0.117	0.099	**0.637**
Teachers	0.084	**0.616**	0.154	-0.001	0.216	0.190	0.253
Proximity	0.103	0.022	-0.063	0.159	0.151	**0.652**	0.085
Prof. experience	0.154	0.129	0.294	-0.008	0.100	**0.610**	-0.067
Personal experience	0.008	0.072	0.224	0.120	0.115	**0.765**	0.093
Structure	0.036	0.264	0.155	0.085	0.017	**0.425**	0.115
Underperforming	0.026	-0.029	**0.735**	0.114	-0.077	0.216	0.015
Excelling	0.137	0.014	-0.129	0.086	**0.528**	0.411	0.336
District reputation	0.099	-0.040	-0.029	0.058	**0.502**	0.352	0.414
Safe	0.131	0.167	-0.027	0.081	**0.390**	0.190	0.184
Eigenvalue	7.747	1.746	2.066	1.440	1.064	1.138	2.740
Variance explained by rotated component	3.334	2.983	2.217	2.490	2.314	2.185	2.139
Percent of total variance explained	11.112	9.943	7.390	8.320	7.712	7.283	7.128

As shown in Table 1, the seven factors had an eigenvalue above our criterion of 1.00, and all items had at least one high loading and fit at least one factor. Thus, the fit of items to these seven factors seemed very good, supporting the idea that these incentive items can be classified into seven identifiable categories. Table 2 provides a brief description of each factor.

Table 2

Seven Dimensions of the Graduate Employment Preferences Survey

Name of factor	Description
Monetary incentives (Money)	Items with a pecuniary benefit including present and future salary, benefits, supplemental pay, and retirement benefits
Professionalism (Prof)	Items that indicate a collaborative and instruction-focused culture at the school, including professionalism of principal and teachers, and opportunities for mentoring and collaboration
At-risk environment (AR)	School characteristics that indicate a challenging instructional environment: low SES, "underperforming" label, and high percentage of English Language Learners
Position characteristics (Pos)	Allocation of a teacher's time including limited supervisory duty, guaranteed prep time, personal leave, shorter contract day
Achievement (Ach)	High achieving students with strong home support, safe atmosphere, and strong reputation of school and district
Familiarity (Fam)	Previous personal or professional experience at the school, proximity to home, or structured curriculum
Instructional characteristics (Instr)	The structures of the school that affect instruction directly, including block scheduling or "looping" in elementary grades, technology availability, and class size

Correlations among scales. The correlations among the seven scales of the GEPS are reported in Table 3. These coefficients range from 0.075 to 0.469. Squaring a correlation coefficient informs us about the common variance shared by two subscales. The highest amount of shared variance ranges only about 22%. When corrected for attenuation, which removes the influence of reliability as a ceiling for the correlation coefficient, the amount of shared variance ranges from 1.7% to 44.1%. If these data were unidimensional, the amount of shared variance would be very high. The factor analysis findings coupled with these correlations lead us to conclude that the scales derived from the use of this survey are relatively independent. Given the combination of evidence regarding content, we concluded that the seven intended scales of the GEPS were supported by these data.

Table 3

Correlations Among Subscales of the Graduate Employment Preferences Survey

Scales	Money	Prof	AR	Pos	Ach	Fam	Instr
Money	**(0.843)**	0.444	0.105	0.487	0.219	0.225	0.291
Prof	0.529	**(0.837)**	0.277	0.440	0.409	0.390	0.480
AR	0.132	0.349	**(0.751)**	0.230	0.078	0.378	0.316
Pos	0.602	0.546	0.301	**(0.777)**	0.395	0.342	0.457
Ach	0.279	0.524	0.105	0.525	**(0.729)**	0.416	0.428
Fam	0.305	0.531	0.544	0.483	0.607	**(0.644)**	0.351
Instr	0.401	0.664	0.461	0.656	0.634	0.553	**(0.625)**

Note. Upper diagonal—product moment correlations. Lower diagonal—corrected for attenuation. Reliability estimates appear in bold.

Reliability

Internal consistency reliability was estimated for each of the emerging scales as determined from the factor analysis using coefficient alpha. We set a criterion of 0.70 as being a satisfactory level of reliability for our purposes. Alpha estimates of reliability are reported in Table 4. Of the seven scales, only two had reliability estimates below our arbitrary criterion of 0.70. Because of their low reliability estimates, we are inclined to have less confidence in drawing conclusions from the data with regard to graduates' preferences in these two areas.

Table 4

Mean (M), Standard Deviation (SD), Effect Size, and Reliability Estimate (Alpha) for Each of Seven Employment Incentive Factors

Incentives for employment as a teacher	*M*	*SD*	Effect	Rel. Est.
1. Monetary incentives (Money)	4.539	0.542	0.503	0.843
2. Professionalism (Prof)	4.609	0.458	0.591	0.837
3. At-risk school environment (AR)	3.382	0.684	-0.958	0.751
4. Position characteristics (Pos)	4.074	0.615	-0.088	0.777
5. Achievement (Ach)	4.156	0.525	0.019	0.729
6. Familiarity (Fam)	4.032	0.604	-0.138	0.644
7. Instructional characteristics (Instr)	4.171	0.578	0.038	0.625
Grand mean	4.141	0.792		

Item Analysis

An item analysis was conducted using the subscale total score as the criterion for establishing item discrimination of the items chosen for each scale. All discrimination analyses were corrected for spurious contribution of each item in forming the criterion score, a problem when only a few items constitute the criterion score. The results confirm what appears in the factor analysis. All discrimination indexes were high, with a median of 0.76, and a range from 0.56 to 0.84. These subscales appear to be highly internally consistent, given the few items used to comprise each scale. Also, all items in the survey appear to be highly effective members of the subscale to which each was assigned.

Differences Among Scales

Another source of validity evidence comes from differences in the means of the seven dimensions of the GEPS. As some types of incentives should be more or less attractive than others, we expected the seven scales to differ in desirability; thus, we used a one-way repeated measures analysis of variance to determine whether this was so. If the scales differed, then this evidence would support the independence of interpreting and using these scales as types of incentives. We set alpha at 0.001 to reject the null hypothesis for no differences among the means. Under the condition of unidimensionality, these hypothesized subscales would not be materially more or less different. The results of this analysis show that the means differed significantly ($F = 297.876$, $df = 6, 2280$, $p < .001$). Means, standard deviations, and standardized mean differences with the grand mean are shown in Table 4. There is systematic variation among the means as one mean is substantially lower than the grand mean, two means are moderately above, and the other means are close to the grand mean. Thus, these scales are unlikely to be part of a unidimensional construct.

Given the weak evidence from reliability for the last two scales and the fact that the means of these two scales were very close to the grand mean, we make no claim for the validity of these two scales: familiarity and instructional characteristics. Taken together, the evidence presented above supports the conclusion that the *Graduate Employment Preferences Survey* provides five validly interpretable subscales, representing five types of incentives that may influence a graduate from a teacher education program to apply to teach in a particular school district.

Findings

Three of the five different subscales resulting from the data analysis are important in explaining job seekers' preferences. They are: at-risk environments, professionalism, and monetary incentives. Two factors, position characteristics and achievement, while reliable, showed small effect sizes.

At-Risk Environment

The factor with the strongest effect, greater than -0.958, was at-risk environment. Three items comprised this factor:

- School is Title I due to low economic status of parents
- High percentage of English Language Learners
- School designated as "underperforming"

The mean of items on this factor was 3.382, with a grand mean of 4.141 for all items. That is to say, applicants rated these items lower than other items and their subscales. This finding is consistent with the general knowledge that urban high-poverty schools are hard to staff and with the recent finding of Winter and Melloy (2005) that labeling a school as low achieving had significant effects on the perceptions of potential applicants.

Professionalism

The factor with the second-largest effect size, 0.591, was professionalism. This factor can be interpreted as the applicants' perception of the professional climate of the school. The items with the highest loading in this factor were:

- Opportunities to collaborate with other teachers
- Effective mentoring programs for beginning teachers

The next highest loading factors were the professionalism of the principal, followed by professionalism of teachers at the school and preferred particular curriculum or discipline practices. Prospective teachers prefer schools that provide support for them. This finding is consistent with research cited earlier that retention of current teachers is linked to their perceptions of the professional supports available to them.

Monetary Incentives

The effect size for monetary incentives was 0.503. Items within the monetary incentives factor with the highest loadings were:

- Above average salary for beginning teachers
- Potential for future salary growth
- Benefits (e.g., health and other insurance)

Next came retirement package (e.g. health care after retirement) and then items with less impact, but still related to remuneration:

- District paying tuition for graduate studies
- Opportunities for supplemental pay (coaching, summer work)

These findings are consistent with the literature that cites teacher pay as a significant factor in recruiting and retaining teachers.

Position Characteristics and Achievement

Two of the subscales met our reliability criterion of 0.70 but had low effect sizes. These were position characteristics and achievement. The achievement factor items related to high achievement of students, reputation of school and district, home and community support, and safety and security of the school. The position characteristics factor included items that are often the subject of collective negotiations with teacher bargaining units and, thus, arguably important to veteran teachers:

- Shorter contract day
- Personal leave days available
- Guaranteed preparation time during the student day
- Minimal or no duty responsibilities (e.g., lunch/bus duty)

These items are not as attractive as others to beginning teachers.

Discussion

This study sought data concerning prospective applicants' ratings of particular job-related factors that are considered when they decide where to submit employment applications. Because some of the factors studied here are more amenable to manipulation by school districts than those at the state level of policymaking, this study may provide some preliminary guidance to districts concerning job vacancy characteristics and recruiting emphases. This is an area under-represented in the school management literature. Items with large effect sizes, and thus most deserving of attention, clustered on three factors: at-risk environments, professionalism, and monetary incentives.

At-Risk Environments

Beginning teachers are not attracted to at-risk schools. This is not a surprise. We surmise that beginning teachers are already overwhelmed with the demands of teaching without the additional challenges brought by the low achievement and low socioeconomic status of students. Notably, Ingersoll (2004) analyzed school and staffing survey data and found that "high-poverty public schools, especially those in urban communities, lose, on average, over one fifth of their faculty each year" (p. 2). Recruiting and retaining qualified teachers in these schools was a program priority of No Child Left Behind, which required states to develop plans to insure that schools receiving Title I funding were staffed by highly qualified teachers. The problem of staffing high poverty schools is not limited to recruitment of new teachers.

Further investigation may shed some light on the levers of change that could be used to increase the attractiveness of at-risk environments to prospective teachers. For example, according to its website, *Teach For America* has attracted 17,000 high achieving college students to commit

two years to teaching in low-income communities. How is the recruiting success of *Teach For America* to be explained and what lessons might it hold for traditional teacher preparation programs in motivating prospective teachers? Why do some high performing high-poverty schools retain qualified teachers and how might those characteristics be replicated in other schools and communicated by those school districts to prospective applicants? How might teacher training programs provide prospective teachers with experiences that showcase successful teaching in at-risk environments, fostering a sense of efficacy and purpose among future teachers? In what ways might school districts provide inducements by changing the job characteristics of teachers in high poverty schools so that prospective teachers would judge the benefits to outweigh the costs of teaching there?

Professionalism

Potential applicants rated professionalism as highly important in their decisions about potential employers. This factor included items on the professionalism of the principal and teachers, and opportunities for collaboration and mentoring. We speculate that new teachers seek school districts that will provide the circumstances where they can be successful. These new applicants appear to value some of the same organizational attributes valued by "voluntary movers" in Johnson and Birkeland's (2003) study, suggesting that the professional culture of the school is critical to both recruiting and retaining good teachers. Programs such as professional learning communities, mentoring programs, and other means of supporting collaboration and success for new teachers may also be attractive incentives to recruit new teachers.

The investment of resources in enhancing teachers' professional capacities may do double duty by improving current teachers' skills and attracting new teachers. A school district that invests in school culture, creating the conditions where collaboration and support are available, may increase both retention and recruitment. The fiscal resources necessary to provide conditions of collaboration and support, thus, are leveraged to induce new teachers to apply for positions. Similarly, training for school principals in the creation of healthy school climates for beginning (and experienced) teachers could produce gains in recruitment and retention. This investment is not necessarily cheap or quick, however, as it involves not only developing effective professional development programs, but training school leaders in collaborative and respectful ways of working with teachers and sharing some decision making. At the same time, school leaders must ensure the safe environment, a culture of high expectations, and other factors associated with successful high-poverty schools. Developing leaders who can create and sustain such environments presents its own challenges in the areas of support, collaboration, recruitment, and retention.

Monetary Incentives

Prospective teachers' interest in monetary incentives is consistent with the literature that indicates the importance of salary and benefits for teachers. The unanswered question is how districts would distribute available funds across the total compensation package for certified employees. Pressure from unionized teachers to distribute compensation resources to favor current (rather than potential) employees is to be expected. Another constraint is the collective bargaining agreement that allocates resources in structured ways. Changes in the unified salary schedule, benefits, teacher assignment, work responsibilities, and other incentives may have to be negotiated (Murphy & DeArmand, 2003). Thus, a district trying to recruit new teachers may have limited latitude in the ability to shift resources to increase the financial incentives for new hires.

It is also interesting to note the factors that did not have strong effects on graduates' preferences. These include control over teaching conditions such as student supervision duties, shorter class days, personal leave, preparation time, and duty responsibilities. These items are likely important to current teachers, but it should not be assumed that the current teacher negotiators understand or speak for the needs of potential teachers. Thus, for example, when current staff members assert that it is important to free teachers from student supervisory duties or to provide shorter contract days, this should be recognized as a claim for retaining current teachers because the data do not support the claim that such strategies attract new teachers.

Communication With Applicants

Our data suggest that districts must communicate with applicants about the programs they offer. It is unclear how potential applicants form their impressions of school districts, particularly their impressions about a school's at-risk features or professionalism. If applicants base decisions on these factors, districts should consider their ability to influence these perceptions. Communicating the efficacy of support mechanisms for teachers may be more difficult than comparing one district's beginning salary to that of another, but it may have an equal impact on recruitment success.

School districts considering how to invest resources in recruiting and retaining teachers should think beyond the bounds of distributing resources across salaries and benefits. More broadly, the total costs of teacher compensation can be considered to include the monetary incentives (salary, benefits, retirement, and other fixed costs, tuition reimbursement, supplemental pay for extra duties) as well as the costs of working conditions (e.g., paid leaves, preparation periods, duty-free time). Even more broadly, school districts should consider the investment of resources in teacher and leader development as having potential to impact retention and recruitment in significant ways. These include mentoring programs, providing time and resources for team planning, increasing the involvement of

teachers in professional decision making, and helping principals to develop and maintain school cultures that encourage teachers and build collegiality. These efforts and successes should be communicated to potential applicants as vigorously as the compensation packages are promoted.

Limitations

This study has several limitations. First and most obviously, the respondents are drawn from a limited geographic area and may be factoring in local knowledge of the economy, school district characteristics, and other information that may or may not be the same in other contexts. At the same time, school district recruiting is often geographically limited; therefore, studies that generalize across a national sample may not provide the type of information needed in local labor markets. Second, as is true for any research that asks potential applicants about their intentions, the self-report may not match actual behaviors. How the respondents think in the abstract about job attractiveness may not match what they do during a job search where the information they need to make judgments on particular factors (e.g., professionalism of the principal) is limited or not available. In addition, there may be other variables that influence applicants that we did not capture. Despite these limitations, the findings presented here provide resources for something more than seat-of-the-pants decision making.

Future Research

For school districts wishing to attract more applicants, several questions remain unanswered. Although our data suggest that applicants find collaborative and supportive environments attractive, it is unclear as to how potential applicants determine whether schools or school districts provide the atmosphere that they seek. What is the best way to provide information about the professional culture of the school to potential applicants? Which media or other mechanisms do new teachers use to gain information? In what ways can school districts positively influence pre-service teachers during field experiences so that the potential applicants are attracted to the district?

The GEPS provided useful data on the preferences of future teachers. School districts may collect data on their current applicant pool or current teachers using this tool. It may also prove useful for predicting employee retention within school districts. Future research asking currently employed teachers to respond to the items on the GEPS may inform school districts of the conditions that impact their decisions about retention and help shape district policy in that regard.

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Appendix

Graduate Employment Preferences Survey

Your participation in this survey will help provide information about the incentives that might attract teachers like yourself to work in particular school districts. We appreciate your help!

Please tell us a few things about yourself. ☐ Female ☐ Male Age: _____

Your area: ☐ Elementary ☐ Secondary ☐ Special Education
☐ Early Childhood ☐ ESL/Bilingual

Your program: ☐ Undergraduate (will receive a Bachelor's degree) or
☐ Post Baccalaureate

Have you accepted a teaching position? ☐ Yes ☐ No
If yes, in what district? _____

What grade level(s) do you hope to teach? _____

Please look over the list of incentives below that school districts might consider attractive to new teachers. For each, please circle the response to indicate whether you find it Strongly Attractive (SA), Attractive (A), Neither attractive nor unattractive (N), Unattractive (U), or Strongly Unattractive (SU).

Above average salary for beginning teachers	SA A N U SU
Potential for future salary growth	SA A N U SU
Benefits (e.g., health and other insurance)	SA A N U SU
Retirement package (e.g., health care after retirement)	SA A N U SU
Minimal or no duty responsibilities (e.g., lunch/bus duty)	SA A N U SU
District paying tuition for graduate studies	SA A N U SU
Opportunities for supplemental pay (coaching, summer work)	SA A N U SU
Shorter contract day	SA A N U SU
Personal leave days available	SA A N U SU
Guaranteed prep time during the student day	SA A N U SU
Adequate to high achievement level of students in school	SA A N U SU
Strong home/community support of students	SA A N U SU
School is Title 1 due to low economic status of parents	SA A N U SU
Professionalism of the principal	SA A N U SU
Opportunities to collaborate with other teachers	SA A N U SU
Effective mentoring programs for beginning teachers	SA A N U SU

(continued)

Appendix *(continued)*

Particular curriculum or discipline practices that you like	SA A N U SU
High percentage of English language learners	SA A N U SU
Particular scheduling that you like (looping, block scheduling)	SA A N U SU
Technology and technology support available for classrooms	SA A N U SU
Class sizes smaller than in competing school districts	SA A N U SU
Professionalism of teachers at the school	SA A N U SU
School is close to where you live or want to live	SA A N U SU
You had student teaching or intern experiences in the district	SA A N U SU
Had children in school there or went to school in that district	SA A N U SU
Structured curriculum so that you know what you are supposed to teach and how to teach it	SA A N U SU
School recognized as "A+" or "excelling"	SA A N U SU
District reputation for achievement	SA A N U SU
School seems to be a safe and secure place to be	SA A N U SU